



# Volunteer Lake Assessment Program Individual Lake Reports

## TUCKER POND, SALISBURY, NH

### MORPHOMETRIC DATA

Watershed Area (Ac.):	486	Max. Depth (m):	6.7	Flushing Rate (yr <sup>-1</sup> )	2.1
Surface Area (Ac.):	57	Mean Depth (m):	2	P Retention Coef:	0.69
Shore Length (m):	2,300	Volume (m <sup>3</sup> ):	449,500	Elevation (ft):	675

### TROPHIC CLASSIFICATION

Year	Trophic class
1980	OLIGOTROPHIC
1998	MESOTROPHIC

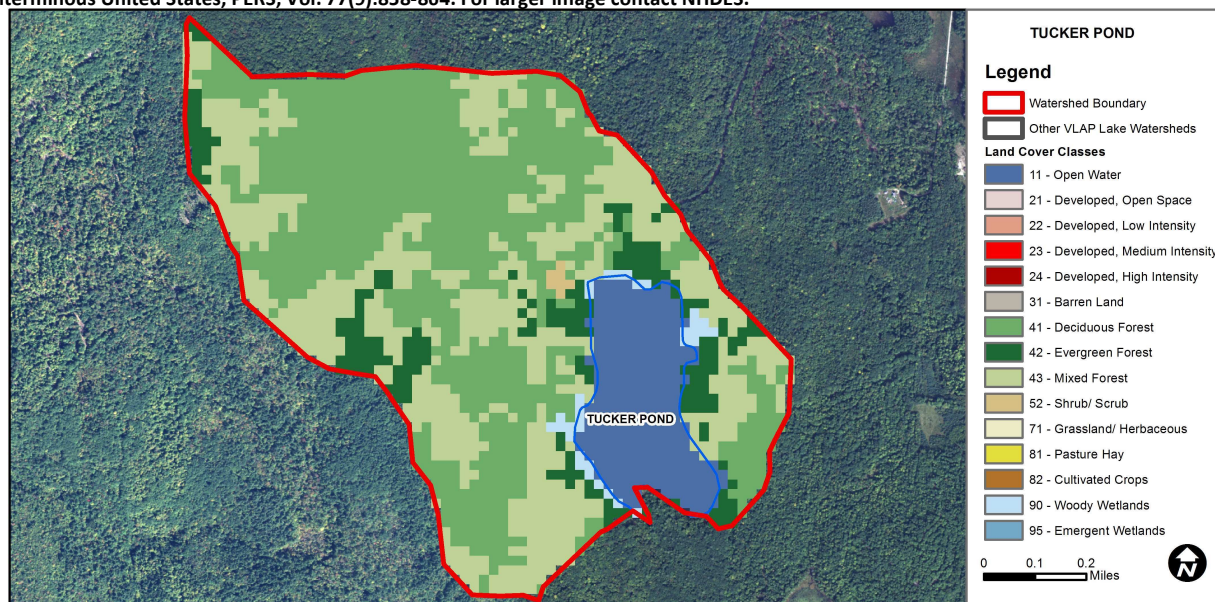
### KNOWN EXOTIC SPECIES


The Waterbody Report Card tables are generated from the 2012 305(b) report on the status of N.H. waters, and are based on data collected from 2001-2011.

Designated Use	Parameter	Category	Comments
Aquatic Life	Phosphorus (Total)	Good	>=5 samples and median is < threshold but > 1/2 threshold value.
	pH	Slightly Bad	>10% of samples exceed criteria by a small margin (minimum of 2 exceedances).
	D.O. (mg/L)	Encouraging	< 10 samples and no exceedance of criteria. More data needed.
	D.O. (% sat)	Encouraging	< 10 samples and no exceedance of criteria. More data needed.
	Chlorophyll-a	Good	>=5 samples and median is < threshold but > 1/2 threshold value.
Primary Contact Recreation	E. coli	No Data	No Data for this parameter.
	Chlorophyll-a	Very Good	At least 10 samples with 0 exceedances of criteria.

### WATERSHED LAND USE SUMMARY

Fry, J., Xian, G., Jin, S., Dewitz, J., Homer, C., Yang, L., Barnes, C., Herold, N., and Wickham, J., 2011. Completion of the 2006 National Land Cover Database for the Conterminous United States, PERS, Vol. 77(9):858-864. For larger image contact NHDES.



Land Cover Category	% Cover	Land Cover Category	% Cover	Land Cover Category	% Cover
Open Water	11.1	Barren Land	0	Grassland/Herbaceous	0
Developed-Open Space	0	Deciduous Forest	44.65	Pasture Hay	0
Developed-Low Intensity	0	Evergreen Forest	9.33	Cultivated Crops	0
Developed-Medium Intensity	0	Mixed Forest	33.18	Woody Wetlands	1.5
Developed-High Intensity	0	Shrub-Scrub	0.32	Emergent Wetlands	0



# VOLUNTEER LAKE ASSESSMENT PROGRAM INDIVIDUAL LAKE REPORTS

## TUCKER POND, SALISBURY, NH

### 2012 DATA SUMMARY

#### OBSERVATIONS AND RECOMMENDATIONS (Refer to Table 1 and Historical Deep Spot Data Graphic)

- ♣ **CHLOROPHYLL-A:** Chlorophyll was relatively low and below the NH lake median. Historical trend analysis indicates a significantly improving (decreasing) chlorophyll level since monitoring began. We hope to see this continue!
- ♣ **CONDUCTIVITY/CHLORIDE:** Deep spot conductivity levels were low and below the NH lake median.
- ♣ **TOTAL PHOSPHORUS:** Epilimnetic (upper water layer) phosphorus was relatively low and below the NH lake median. Epilimnetic phosphorus has decreased consistently since 2008 and historical trend analysis indicates a relatively stable phosphorus level since monitoring began. Hypolimnetic phosphorus was slightly above average for the pond.
- ♣ **TRANSPARENCY:** Transparency was good and was slightly greater than the NH lake median. Historical trend analysis indicates a stable transparency since monitoring began.
- ♣ **TURBIDITY:** Turbidity was slightly above average for the pond and may have been caused by low water levels and/or algal growth.
- ♣ **pH:** pH tends to fluctuate below desirable levels and potentially critical for aquatic life.
- ♣ **RECOMMENDED ACTIONS:** Maintain a monitoring frequency of three sampling events per summer to better assess summer water quality and historical trends. Contact the VLAP Coordinator if assistance is needed. Water quality looks good, keep up the great work!

Station Name	Table 1. 2012 Average Water Quality Data for TUCKER POND						
	Alk.	Chlor-a	Cond.	Total P	Trans.		Turb.
	mg/l	ug/l	uS/cm	ug/l	m		ntu
					NVS	VS	
Deep Epilimnion	4.40	2.89	34.8	9	3.60	4.50	1.60
Deep Hypolimnion			34.6	15			1.30

**NH Median Values:** Median values for specific parameters generated from historic lake monitoring data.

**Alkalinity:** 4.9 mg/L

**Chlorophyll-a:** 4.58 mg/m<sup>3</sup>

**Conductivity:** 40.0 uS/cm

**Chloride:** 4 mg/L

**Total Phosphorus:** 12 ug/L

**Transparency:** 3.2 m

**pH:** 6.6

**NH Water Quality Standards:** Numeric criteria for specific parameters. Results exceeding criteria are considered a water quality violation.

**Chloride:** < 230 mg/L (chronic)

**E. coli:** > 88 cts/100 mL – public beach

**E. coli:** > 406 cts/100 mL – surface waters

**Turbidity:** > 10 NTU above natural level

**pH:** 6.5-8.0 (unless naturally occurring)

#### HISTORICAL WATER QUALITY TREND ANALYSIS

Parameter	Trend	Explanation
Chlorophyll-a	Improving	Data significantly decreasing.
Transparency	Stable	Data not significantly increasing or decreasing.
Phosphorus (epilimnion)	Stable	Data not significantly increasing or decreasing.

This report was generated by the NH DES Volunteer Lake Assessment Program (VLAP). For more information contact:  
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